

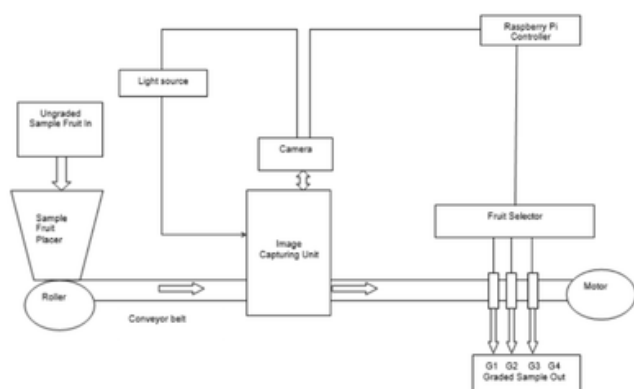
MACHINE VISION BASED, AUTOMATIC, NON-DESTRUCTIVE TESTING OF FRUITS AND VEGETABLES

Seeking parties interested in licensing and commercialization of technology.

Technology Brief

An AI-driven, machine vision system for the automatic, non-destructive inspection, grading, and sorting of fruits and vegetables. Featuring controlled illumination, a conveyor, and a rotating platform, the system captures multi-angle images to evaluate produce without physical damage. Advanced machine learning algorithms assess key quality parameters—including freshness, ripeness, firmness, size, texture, and surface defects—while detecting common diseases. The system then automatically classifies produce into quality grades and routes them into corresponding bins via integrated actuators.

Block Diagram



Technical Applications

This technology automates fruit and vegetable grading and sorting in post-harvest pack houses, cold storage facilities, and food processing plants. By providing non-destructive inspection of freshness, diseases, surface defects, and wax coatings, it enforces stringent quality control and food safety standards to streamline supply chain distribution and satisfy both domestic and international export criteria.

Salient Features

- ✓ Non-Destructive Quality Analysis
- ✓ Disease & Wax Coating Detection
- ✓ Automated High-Throughput Sorting

Glimpse of the Technology



REFERENCE NUMBER

iTNT-TECH-0178



TECHNOLOGY SECTOR

Enterprise Applications



IP STATUS

Patent Granted



APPLICATION NUMBER

201941016140



TECHNOLOGY READINESS LEVEL

TRL - 4

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